STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission On Its Own Motion	: :	
	:	16-NOI-01
Notice of Inquiry Regarding the Regulatory Treatment of Cloud- Based Solutions	: : :	

INITIAL COMMENTS OF PEOPLE OF THE STATE OF ILLINOIS
IN RESPONSE TO THE FEBRUARY 10, 2016 NOTICE OF INQUIRY

The People of the State of Illinois, through Attorney General Lisa Madigan, submit the following comments in response to the Notice of Inquiry Regarding the Regulatory Treatment of Cloud-based Solutions dated February 10, 2016. The People will primarily address the Commission's questions concerning Regulatory Barriers.

Regulatory Barriers:

A. Ratemaking Treatment:

1. *Does current ratemaking practice discourage Illinois utilities from deploying cloud-based solutions (e.g., data analytics) provided by third party vendors?*

The question of whether ratemaking practice affects a utility's decision to adopt cloud-computing needs to be considered in light of the role of the utility as the monopoly provider of essential services. In return for the monopoly franchise, the utility accepts the obligation to provide safe, reliable and ubiquitous service and is expected to provide "adequate, efficient, reliable, environmentally safe and least-cost public utility services at prices which accurately reflect the long-term cost of such services and which are equitable to all citizens." 220 ILCS 5/1-102. The Commission reviews the utility's proposed rates to assure that rates are "just and reasonable." *Id.* at 9-201; 220 ILCS 5/16–108(c) (West 2006) (rates "shall allow the electric utility

to recover the costs of providing delivery services through its charges."). Among the issues the Commission considers in its review of rates are whether a particular cost was prudently incurred and whether the utility has applied the Public Utilities Act and appropriate accounting principles in determining its overall revenue requirement. *See, e.g., Commonwealth Edison Co. v. Illinois Commerce Commission*, 405 Ill.App.3d 389, 400-405 (2d Dist. 2010)(Commission Order reversed: "We agree with IIEC and GC Petitioners that the Commission departed from standard utility cost accounting when it used gross plant to measure ComEd's rate base in the new plant additions."); *Ameren Illinois v. Illinois Commerce Commission*, 2013 IL App (4th) 121008, para. 39 (on rehearing)(Court affirmed Commission decision to deduct deferred taxes from rate base to avoid "an unjust and unreasonable rate base that has been inflated by no-cost capital for the benefit of Ameren.").

Current ratemaking practices generally treat the utility costs, including those associated with management systems and software, according to Generally Accepted Accounting Practices, or "GAAP", and rules established by the Financial Accounting Standards Board, or "FASB." Fundamentally, these rules recognizes a difference between (1) capital investment, which is amortized over the useful life of the asset and on which an entity ordinary recovers the cost of capital[1] associated with the delay in cost recovery; and (2) expenses, which are described by the FASB as "outflows or other using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations." Statement of Financial Accounting Concepts, No. 6 at page 7 (1985). Commission rules incorporate the Federal Energy Regularoy

[1] The FASB describes investments as follows: "Investments by owners are increases in equity of a particular business enterprise resulting from transfers to it from other entities of something valuable to obtain or increase ownership interests (or equity) in it. Assets are most commonly received as investments by owners, but that which is received may also include services or satisfaction or conversion of liabilities of the enterprise." Statement of Financial Accounting Concepts, No. 6 at page 7 (1985).

Commission uniform systems of accounts (USOA) found in federal rules at 18 C.F.R. Part 10, which also reflect the distinction between expense and capital investment. 83 Ill. Adm. Code 415.10.[2]

The categorization of costs as investments that are included in rate base determines whether consumers pay the utility a cost for the capital used to fund the investment. By contrast, costs that do not meet the definition of a capital investment and are not included in rate base, are treated as expenses for which the public pays as the cost is incurred. The difference between whether a cost is in rate base or is treated as a pass-through expense is fundamental to ratemaking and reflects the nature of the underlying cost, including how long the funded asset or service is expected to be useful or provide a benefit. The life of an asset, the associated depreciation expense as well as the cost of equity and debt associated with the investment are dependent on the nature of the cost. Costs that provide an immediate and recurring benefit are ordinarily accounted for as an expense and current revenues are designed to cover them, providing the utility cash flow to operate. Costs that provide a long term benefit may be recovered over the period of the benefit. However, to compensate the utility for the time value of money spent, a cost of capital is determined and paid by the public. The "profit" associated with rate base is really the cost of the equity part of the capital used to fund investment. Capital that is provided by consumers (such as through customer deposits) or through tax policy is no-cost capital and it is legal error to charge consumers a cost of capital on it. *See Ameren Illinois v. Illinois Commerce Commission*, 2013 IL App (4th) 121008, para. 39, *supra.*

---

[2] Section 415.10 Adoption of 18 CFR 101 by Reference. The Illinois Commerce Commission ("Commission") adopts 18 CFR 101, as of November 27, 2013, as its uniform system of accounts for electric utilities, subject to the exceptions set forth in Section 415.200 et seq. of this Part. No incorporation in this Part includes any later amendment or edition.

The Notice of Inquiry contrasts the treatment of on-premises computing as rate base with the treatment of cloud computing as an expense and posits that "utilities favor fixed assets that go into rate base." NOI at 2. It further suggests that current ratemaking practice discourages Illinois utilities from deploying cloud-based solutions because the ratemaking formula only includes a cost of capital on costs that are not expenses. *Id*. This concern appears to be based on the belief that the utility will decline to make prudent, least cost expenditures that are treated as expenses because it is motived by receiving an allowance for the cost of capital. The difference in treatment between expenses and rate base investment, however, should not be considered an obstacle to utility adoption of low-cost, efficient cloud computing solutions.

Ratemaking recognizes that the key function of a utility is to provide and maintain the infrastructure to deliver essential services (electricity, natural gas, or water or waste-water services). This requires ongoing investment in distribution hardware like poles, circuits, transformers, substations; transmission and distribution mains and regulators; treatment plants and pumps and storage facilities. Regulatory accounting is designed around this investment in long term assets. The basic ratemaking formula [revenue requirement = (rate base x cost of capital) + expenses[3]] allows utilities to recover costs that are associated with rendering utility service, such as the costs to bill customers or maintain the utility's accounts, but that do not increase the value of the business, as incurred. This form of recovery assures sufficient cash flow to fund utility operations. Long term costs, such as in physical infrastructure essential to reliable service, that increase the value of the utility assets, are recovered over the life of the asset. The cost of capital associated with these assets represents compensation to investors for providing the capital that is paid back over time. There are advantages and disadvantages to the

[3] *See Business and Professional People v. Illinois Commerce Commission*, 146 Ill.2d 175, 195 (1991).

utility associated with both types of cost recovery: expense recovery is immediate and supports cash flow whereas rate base recovery is longer term, provides less cash in the short run. Rate base treatment means that the utility incurs costs related to the time value of money, and the rate of return reflects the cost of debt and equity. The utility does not retain the rate of return – the return is paid to creditors and shareholders and is intended to reflect actual cost.

The People question the notion that treating cloud-computing as an ongoing expense is a disincentive to adopt lower-cost, modern, efficient, and powerful cloud computing analytic solutions to utility operational needs. Advantages to treating these costs as expenses include:

1. It reflects the way the cost is actually incurred, often on an annual basis for services provided on an on-going basis.

2. It recognizes cost recovery contemporaneously with consumption of the service.

3. Utilities do not have to endure delay and amortization in recovering costs to match the useful life of the investment or service.

4. The immediate recovery of the cost means that there are no capital *costs* associated with the delay in cost recovery.

5. Given the need to constantly invest in infrastructure to maintain reliable service, removing software costs from the utility's capital budget frees capital for needed infrastructure investment related to system safety and reliability.

Utilities regularly incur both expenses and capital costs as needed to operate their systems prudently, at least cost, and in the public interest. If costs that are properly treated as expenses are unusual and have a benefit that extends beyond a year, regulatory accounting allows for the creation of a "regulatory asset" to match the recovery of the cost with the benefit of the expenditure.[4] When a cost is treated as a regulatory asset, the cost is amortized and consumers pay the cost of capital for the unamortized balance. If initial or portions of cloud-computing costs qualify as a regulatory asset due to size or other characteristics, the utility may

[4] See 18 C.F.R. ¶31 and ¶182.3.

be able to delay cost recovery and account for the appropriate cost of capital associated with that delay. On the other hand, if the costs associated with cloud-computing do not vary significantly over time and do not require an initial large expenditure, there is no reason to create a regulatory asset to delay cost recovery and incur capital costs.

It is not clear that a ratemaking practice that avoids delay in cost recovery for software provided as a service by a third-party and allows annual recovery of the cost as a pass-through expense somehow discourages utility investment in cost-effective software solutions such as data analytics and off-premises or cloud computing. The fact that the utility does not receive a return on the expense is simply because there is no delay in recovering the cost associated with the expense. The People maintain that the rules that categorize costs as rate base (investments recovered over a period of years and subject to a "profit" or cost of capital) or as an expense (recovered in the year incurred) in fact reflect the actual economic and financial reality of a cost, and regulatory commissions should fairly and consistently apply those accounting rules to all utility expenditures. Services generally referred to as "cloud computing" could be treated as either expenses or rate base, depending on the specific terms of the arrangement.

The premise that utilities favor fixed assets should be rejected by regulators. Ratemaking is designed to support needed and substantial investment in underlying utility infrastructure. The differences in cost recovery between on-premises computer equipment and cloud-computing, where the latter is seen as a service or expense, stem in large part from the physical reality that on-premises equipment includes actual hardware and ownership of often proprietary software that must last a period of years to be economical. Accounting rules address the proper treatment of these costs and the Commission should not disregard standard accounting rules, particularly when there is not a clear advantage to either type of accounting treatment.

In an April 2015 Accounting Standard Update, the FASB modified its rules concerning "Customer's Accounting for Fees Paid in a Cloud Computing Arrangement." FASB ASU 2015-05 (attached). It defined a "hosting arrangement" as one where (1) the customer can take possession of software without a significant financial penalty and (2) it is feasible for the customer to run the software on its own or to contract with another third party to run the software. *Id.* at ¶350-40-15-4A. The rule provides that a hosting arrangement that does not satisfy these two conditions is a service contract and not a software license. *Id.* at ¶350-40-15-4C.

In its Background and Basis for Conclusions, the FASB pointed out that it was adopting "language that is nearly identical to the guidance applied by cloud service providers … because the Board wanted to use language that already was applied in practice. The guidance applied by the cloud service providers is understood and has been applied in practice for many years." FASB ASU 2015-05, BC-5, citing 2009 Guidance. These rules apply not just to utilities, but to other publicly traded businesses.

According to presenters at the Commission's Business and IT Investments in Cloud Computing Arrangements Policy Forum on September 24, 2015, large sectors of the economy have already embraced cloud-computing models. Dennis Garcia of Microsoft Corporation asserted that Cloud Computing "is not new – its ubiquitous," referring to email hosts, Facebook, Linked In and smart phones. (Microsoft presentation at page 3). Energy Savvy asserted that it currently has 25 utility and DSM clients. (Energy Savvy presentation at 2). Other well-known cloud users are the car share application Uber and Amazon. Current accounting rules have not stymied this movement.

Significantly, in 2014 Baltimore Gas and Electric deployed the C3 Energy Software-as-a

Service data analytics service, and was awarded the 2015 Smart Grid Project of the Year award by POWERGRID International. According to reports about the award, the cloud-computing solution was deployed in May 2014 "to address energy lost to theft and meter malfunction and to monitor meter health and operations. … Within six months the applications met or exceeded all business performance targets. C3 Revenue Protection identified over 8,000 non-technical loss cases with field investigation accuracy rates of 90 percent." http://www.reuters.com/article/ca-c3-energy-idUSnBw035406a+100+BSW20150203 (accessed April 29, 2016). See also http://www.greentechlead.com/smart-grid/baltimore-gas-electric-recognized-smart-grid-project-21538 (accessed April 29, 2016). The significant value that cloud-computing can provide to utilities is being demonstrated, and the question for the Commission may not be whether accounting rules are correct, but whether the utilities are prudently managing their operations if they fail to take advantage of opportunities to save costs and enhance operations.

While some have asked whether the difference in treatment disadvantages cloud computing options or disincentives utilities to move to more modern cloud computing models, the differences in the models and the lower costs expected for these services should be seen as an advantage. No longer will utilities be obligated to shift their focus from their essential and critical responsibility for grid investment and maintenance to the development of business or customer service software and hardware. Instead of spending large sums of money on the tangential cost of business systems, utilities can rely on vendors that specialize in business support systems at a lower cost and obtain a better product. While regulatory accounting has some flexibility to use regulatory assets to smooth out lumpy or unusual, large expenses, it is not a disadvantage to allow a utility to recover cloud computing costs as they are incurred. This reduces delay in cost recovery and uncertainty, and frees up capital for investment in essential

infrastructure.

In conclusion, the regulatory model does not disadvantage cloud computing. Utilities should base the decision about whether they recover their costs in rate base or as an expense on the nature of the expenditure, with a clear eye on prudency, efficiency, and least cost service.

Respectfully submitted,

/s/

Susan L. Satter
Public Utilities Counsel
Illinois Attorney General's Office
100 W. Randolph Street, 11th Floor
Chicago, Illinois 60601
(312) 814-1104
SSatter@atg.state.il.us

April 29, 2016